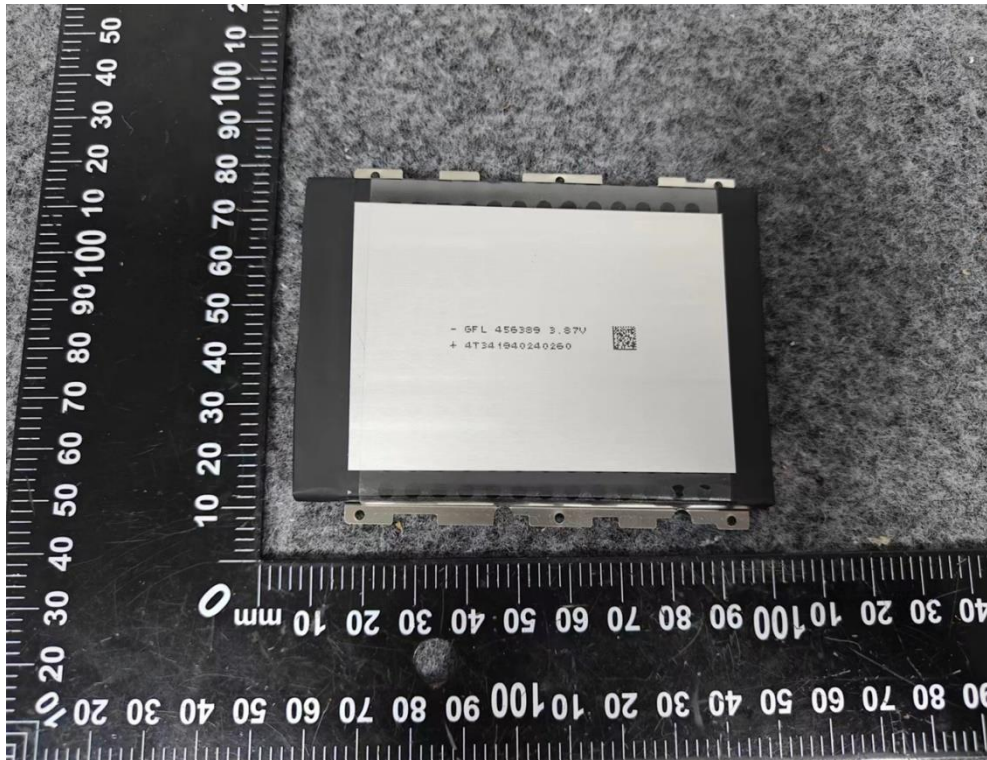
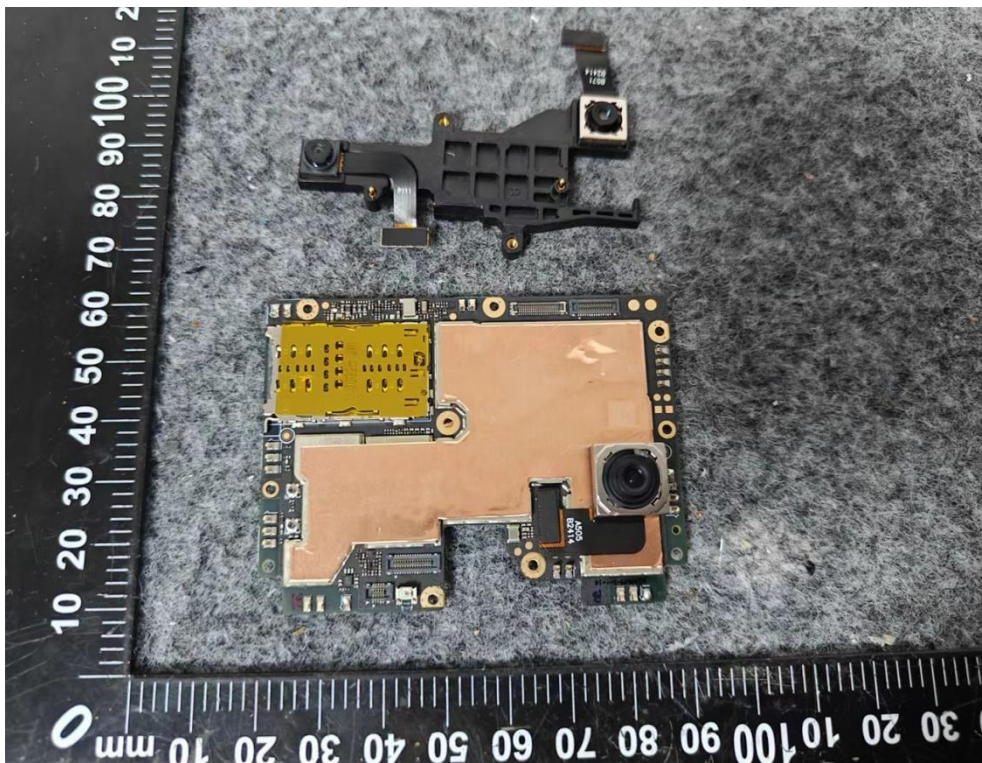
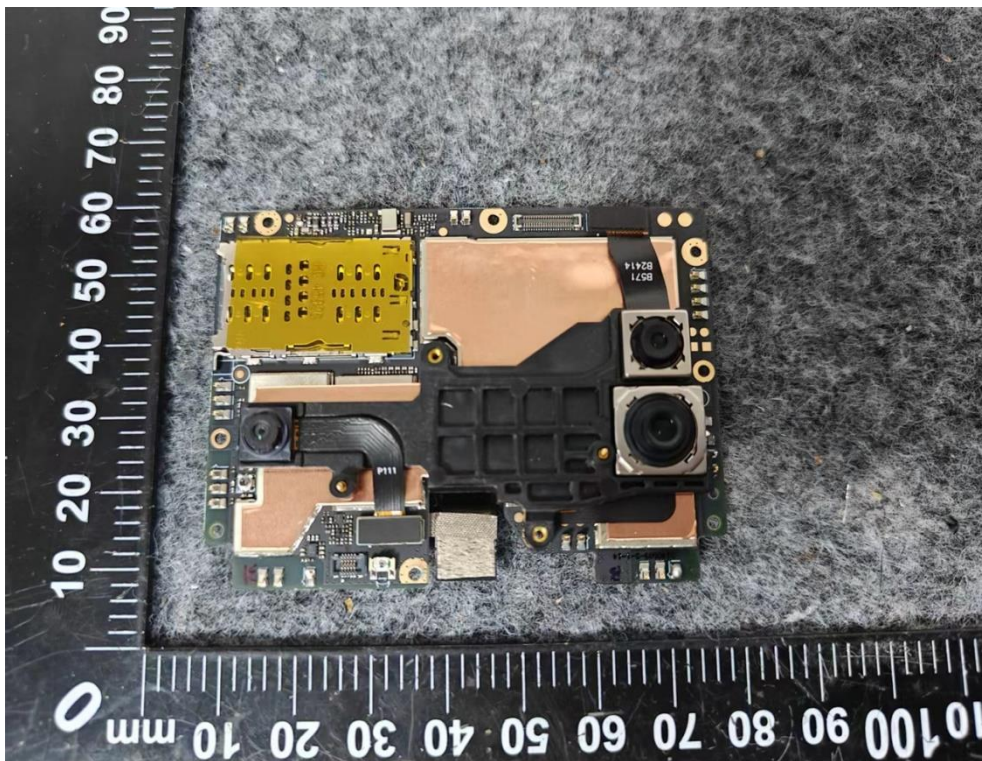
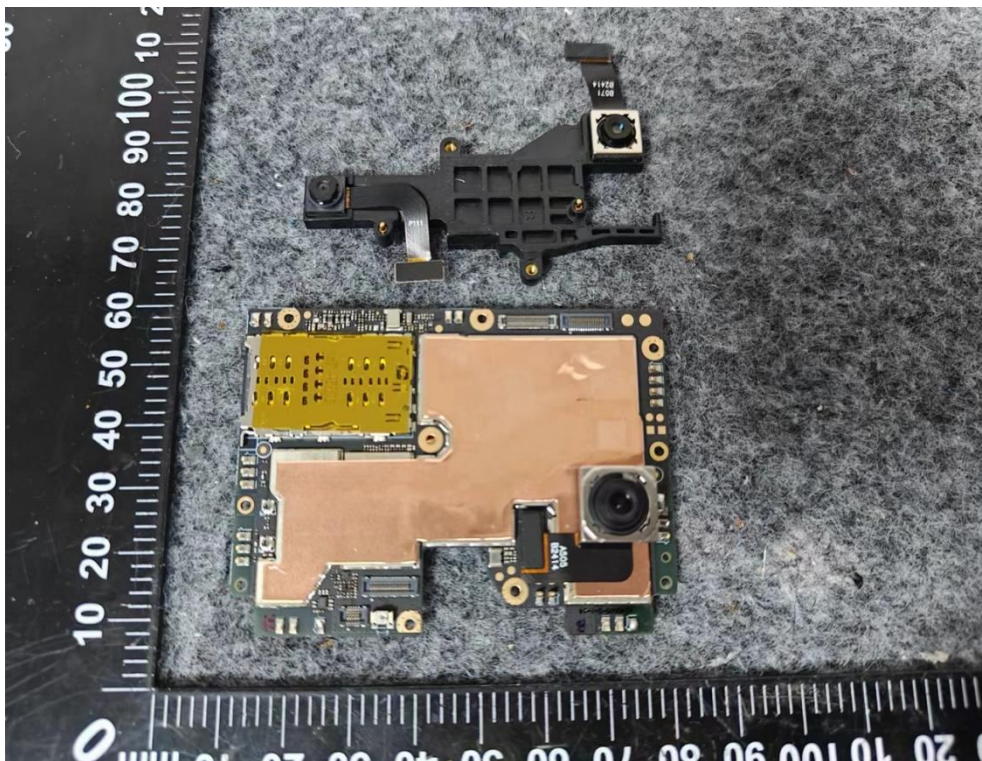
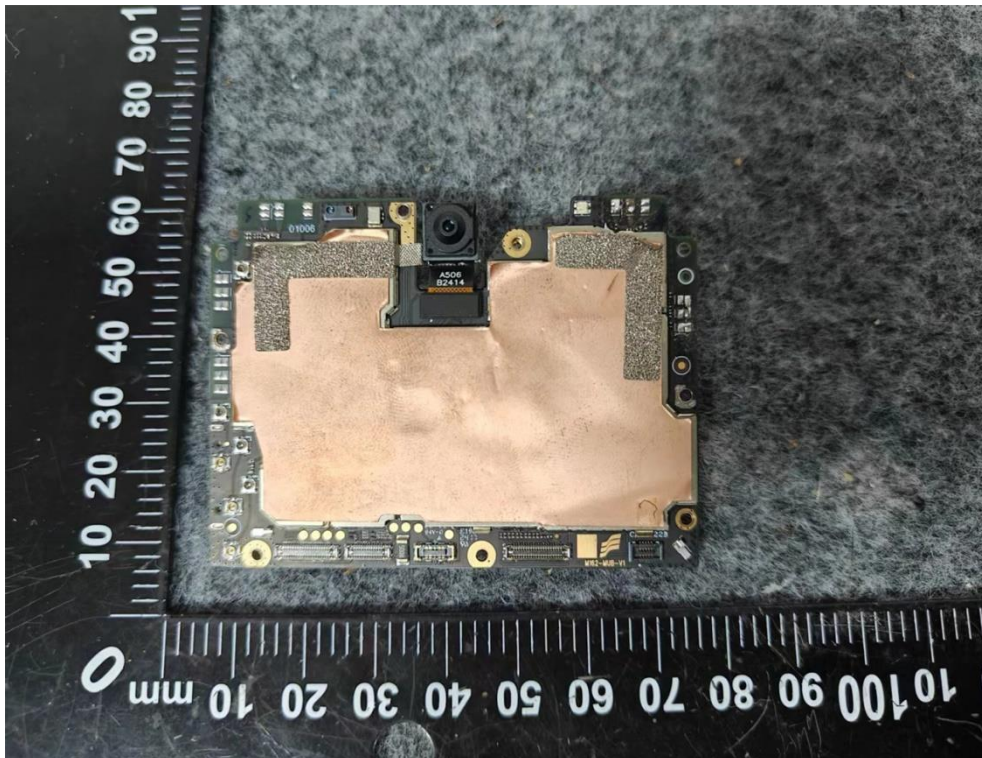
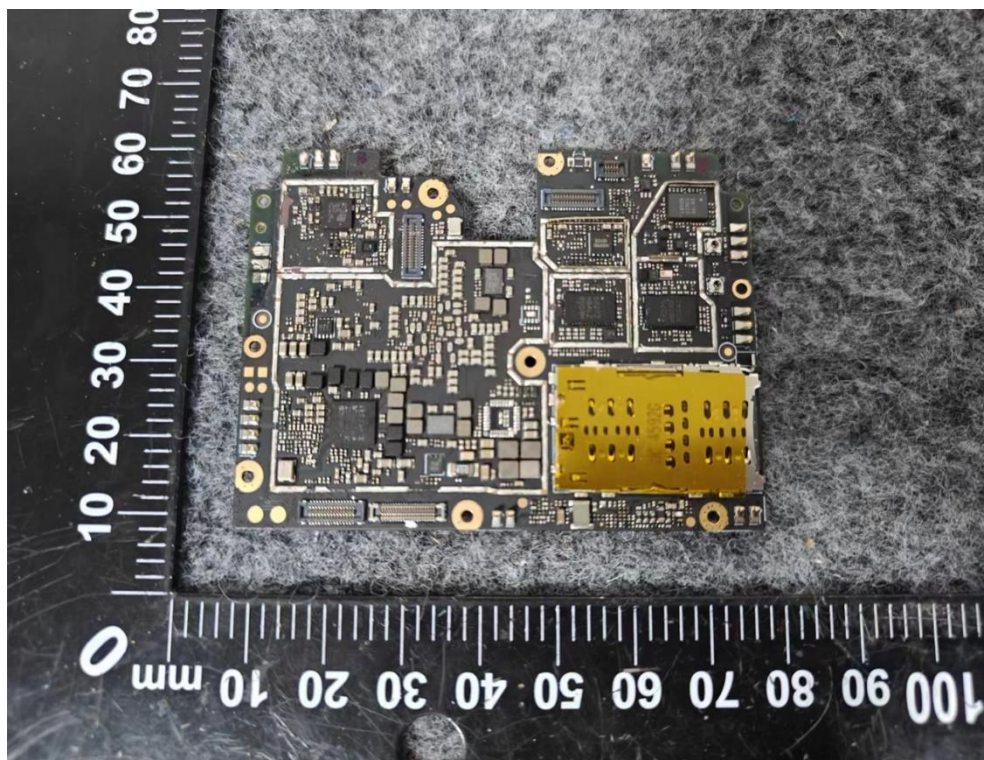
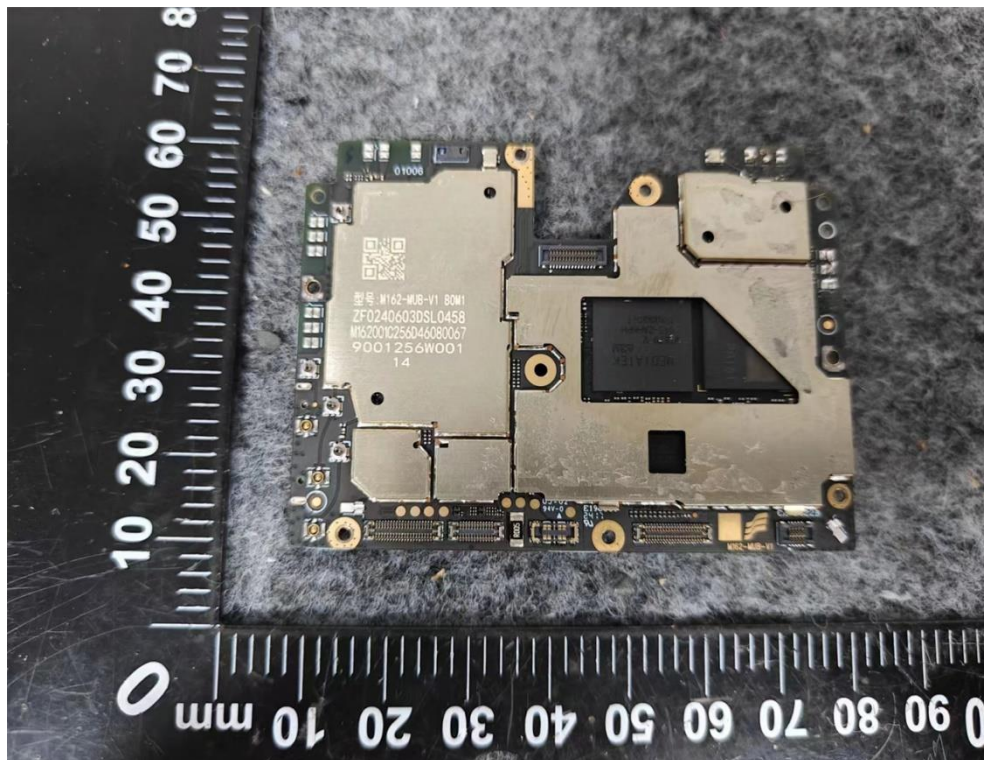


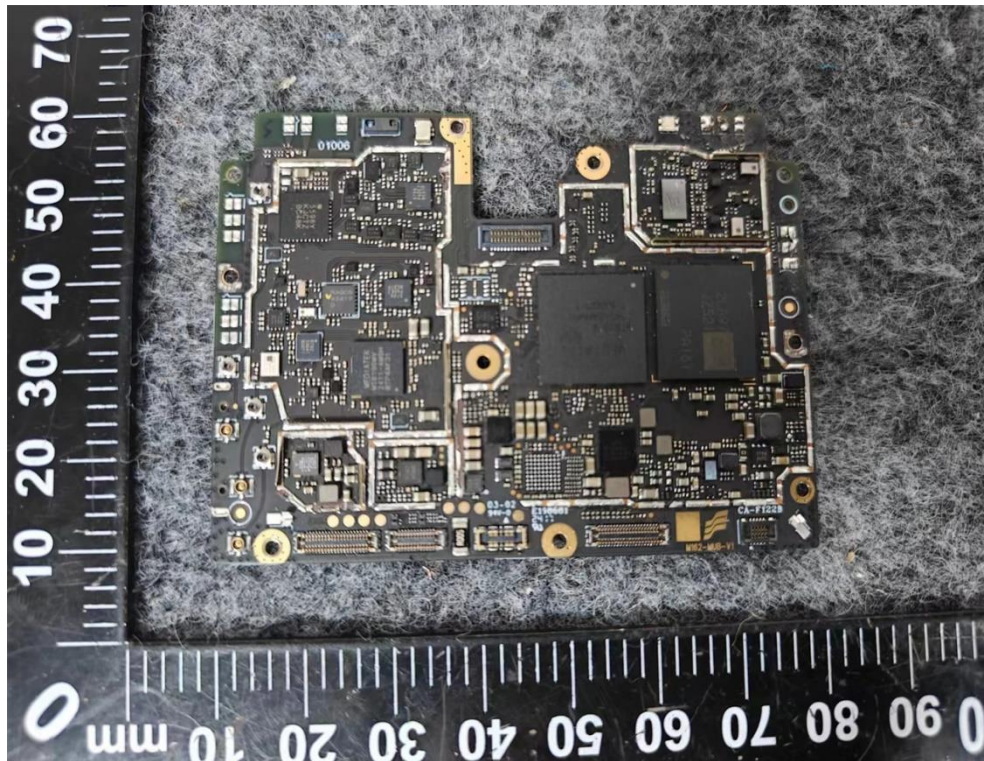


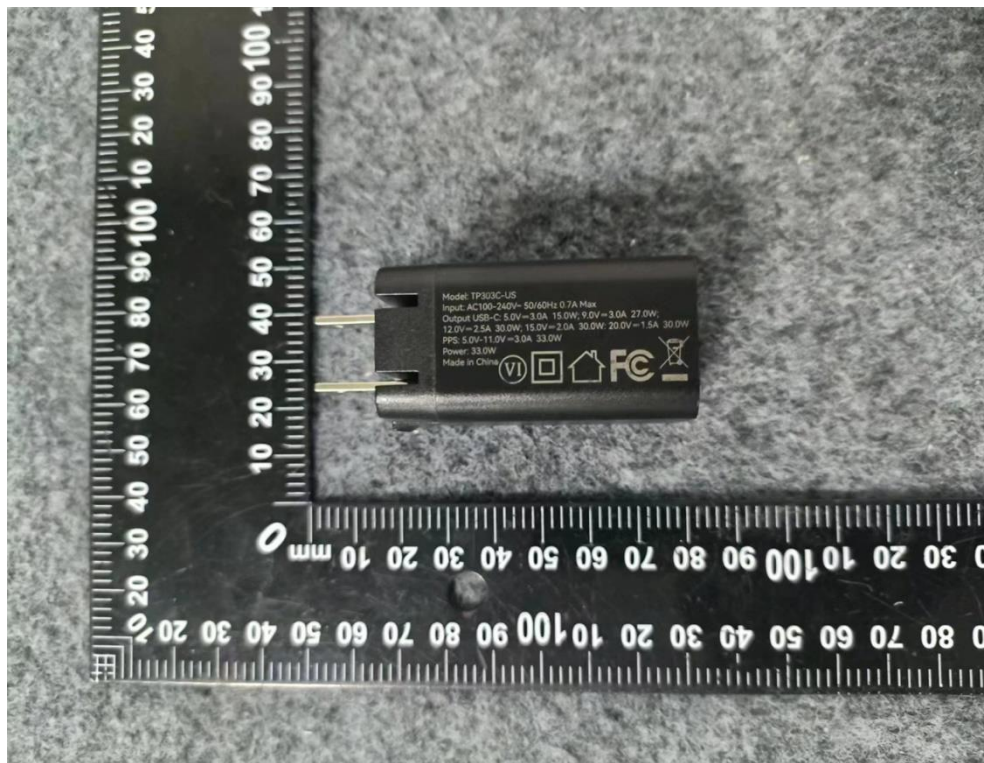






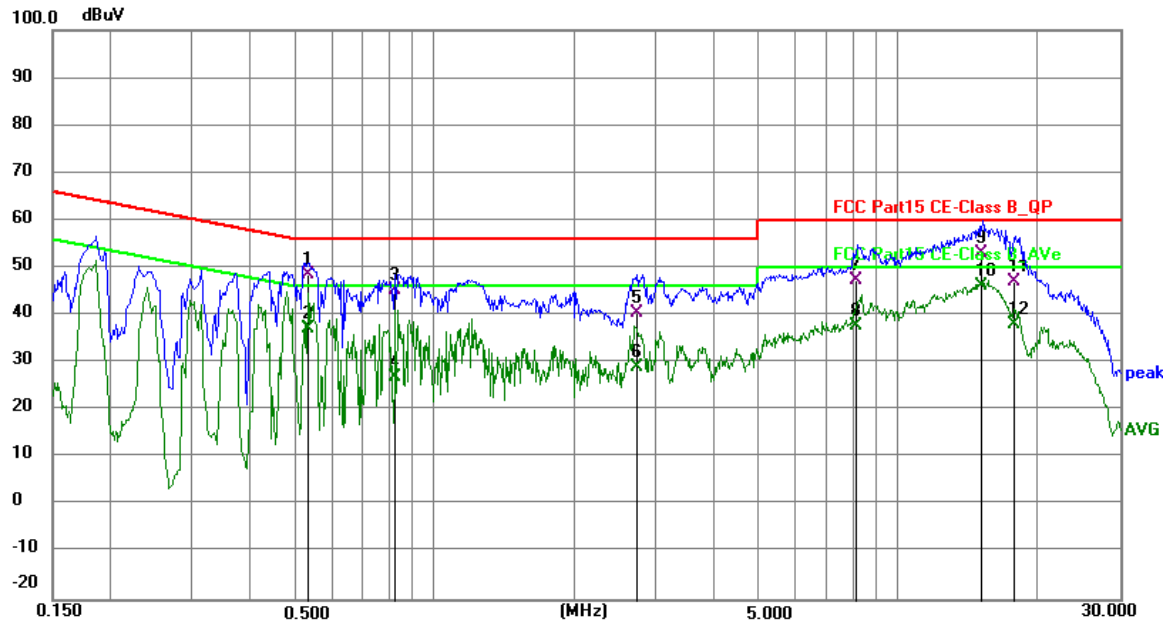






APPENDIX A - AC POWER LINE CONDUCTED EMISSIONS

Test Mode	TX N(HT20) Mode Channel 01 ANT1+ANT2	Phase	Line
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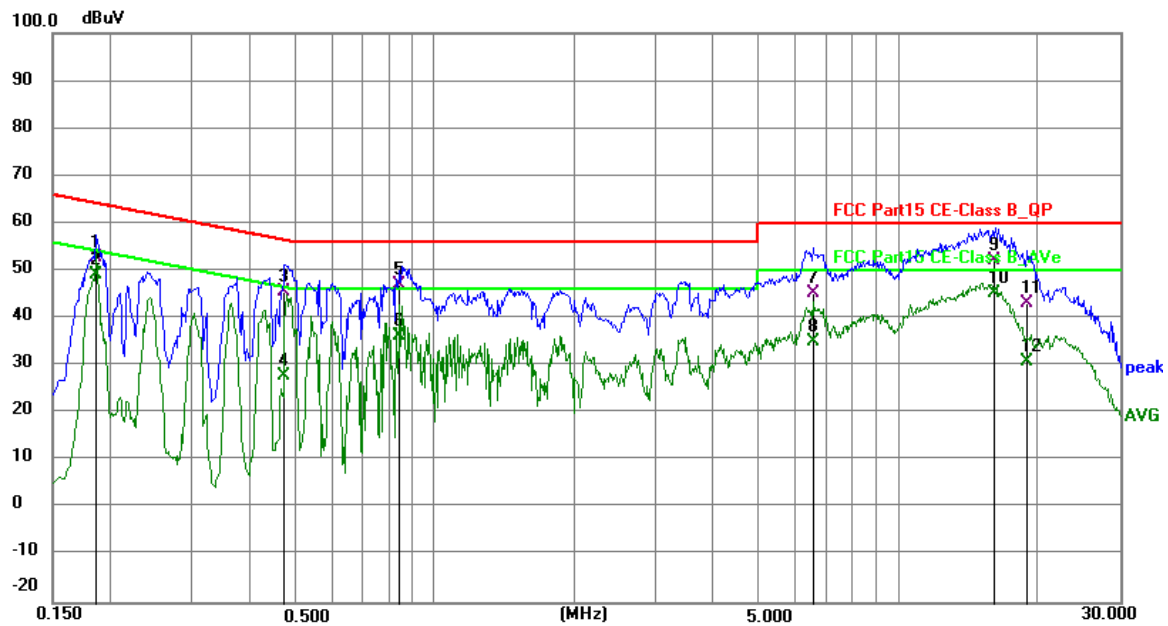
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.5323	38.80	9.62	48.42	56.00	-7.58	QP	P	
2	0.5323	27.51	9.62	37.13	46.00	-8.87	AVG	P	
3	0.8232	35.56	9.63	45.19	56.00	-10.81	QP	P	
4	0.8232	17.35	9.63	26.98	46.00	-19.02	AVG	P	
5	2.7368	30.75	9.65	40.40	56.00	-15.60	QP	P	
6	2.7368	19.46	9.65	29.11	46.00	-16.89	AVG	P	
7	8.1409	37.61	9.70	47.31	60.00	-12.69	QP	P	
8	8.1409	28.11	9.70	37.81	50.00	-12.19	AVG	P	
9	15.1879	43.20	9.75	52.95	60.00	-7.05	QP	P	
10 *	15.1879	36.43	9.75	46.18	50.00	-3.82	AVG	P	
11	17.8655	37.29	9.77	47.06	60.00	-12.94	QP	P	
12	17.8655	28.14	9.77	37.91	50.00	-12.09	AVG	P	

REMARKS:

(1) Measurement Value = Reading Level + Correct Factor.

(2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX N(HT20) Mode Channel 01 ANT1+ANT2	Phase	Neutral
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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1860	43.05	9.63	52.68	64.21	-11.53	QP	P	
2	0.1860	39.47	9.63	49.10	54.21	-5.11	AVG	P	
3	0.4724	35.83	9.62	45.45	56.47	-11.02	QP	P	
4	0.4724	18.16	9.62	27.78	46.47	-18.69	AVG	P	
5	0.8458	37.37	9.62	46.99	56.00	-9.01	QP	P	
6	0.8458	26.64	9.62	36.26	46.00	-9.74	AVG	P	
7	6.5682	35.45	9.70	45.15	60.00	-14.85	QP	P	
8	6.5682	25.27	9.70	34.97	50.00	-15.03	AVG	P	
9	16.1772	42.53	9.77	52.30	60.00	-7.70	QP	P	
10 *	16.1772	35.39	9.77	45.16	50.00	-4.84	AVG	P	
11	18.9177	33.30	9.80	43.10	60.00	-16.90	QP	P	
12	18.9177	21.05	9.80	30.85	50.00	-19.15	AVG	P	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

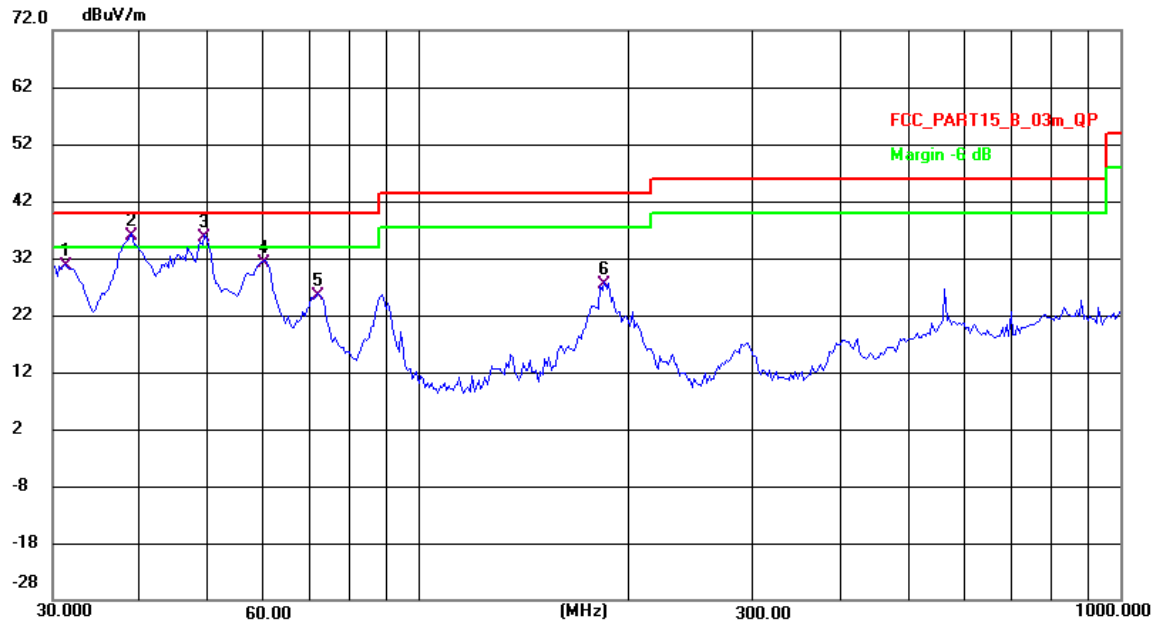
APPENDIX B - RADIATED EMISSION - 9 KHZ TO 30 MHZ

The low frequency, which started from 9 kHz to 30MHz, was pre-scanned and the result which was 20dB lower than the limit line was not reported.

There is a comparison data of both open-field test site and semi-Anechoic chamber, and the result came out very similar.

APPENDIX C - RADIATED EMISSION - 30 MHZ TO 1000 MHZ

Test Mode	TX N(HT20) Mode Channel 01 ANT1+ANT2	Polarization	Vertical
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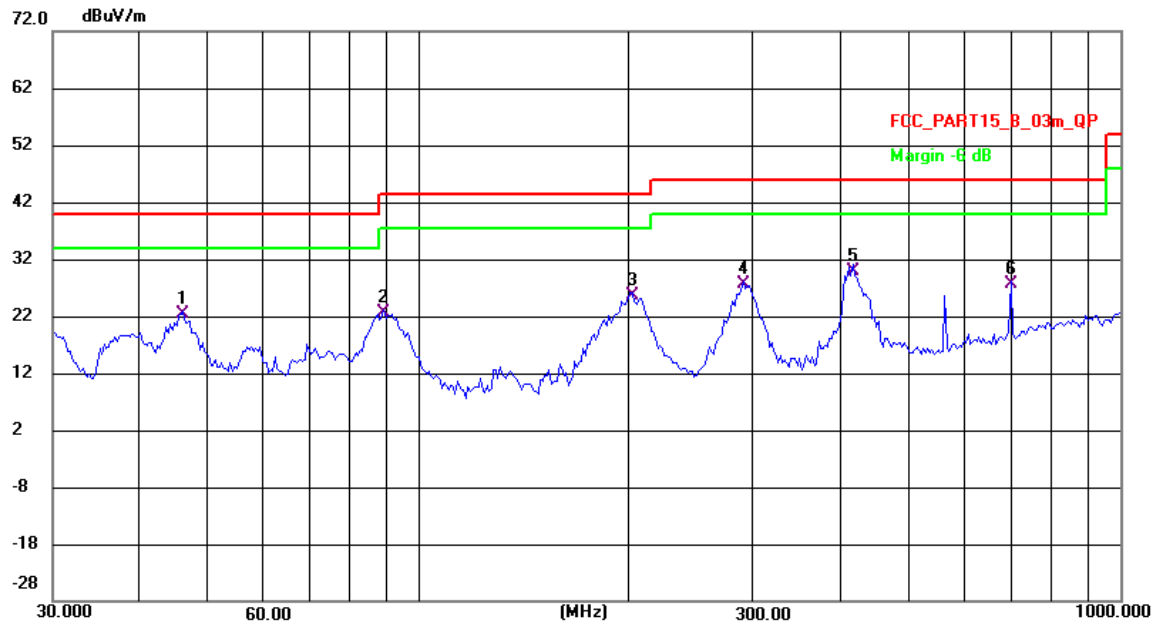


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	31.2920	54.03	-23.28	30.75	40.00	-9.25	QP	100	7	P	
2 *	38.9081	58.09	-22.26	35.83	40.00	-4.17	QP	200	139	P	
3 !	49.4086	57.55	-22.04	35.51	40.00	-4.49	QP	100	219	P	
4	60.1527	53.60	-22.56	31.04	40.00	-8.96	QP	100	81	P	
5	71.7054	49.77	-24.35	25.42	40.00	-14.58	QP	200	110	P	
6	183.8660	50.43	-23.09	27.34	43.50	-16.16	QP	200	226	P	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

Test Mode	TX N(HT20) Mode Channel 01 ANT1+ANT2	Polarization	Horizontal
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No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	46.0558	44.60	-22.19	22.41	40.00	-17.59	QP	100	3	P	
2	89.1579	48.37	-25.74	22.63	43.50	-20.87	QP	200	13	P	
3	201.4539	50.40	-24.74	25.66	43.50	-17.84	QP	200	276	P	
4	290.3170	49.96	-22.44	27.52	46.00	-18.48	QP	100	110	P	
5 *	415.4486	48.51	-18.65	29.86	46.00	-16.14	QP	100	285	P	
6	698.8035	39.82	-12.20	27.62	46.00	-18.38	QP	100	181	P	

REMARKS:

- (1) Measurement Value = Reading Level + Correct Factor.
- (2) Margin Level = Measurement Value - Limit Value.

APPENDIXD -RADIATED EMISSION- ABOVE 1000MHZ

Test Result of Radiated Spurious at Band edges.

Note: All test plots below include both horizontal and vertical, only show the worst mode data

Test Results					PASS			
Frequency Range					2310MHz~2410MHz			
Test Mode					TX B Mode Channel 01 ANT1			
N o.	Freq MHz	Polarity	Reading (dBUV/m)	Correct Factor	Result (dBUV/m)	Limit (dBUV/m)	Margin	Remark
1	2390	H	73.69	-21.47	52.22	74.00	-21.78	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	75.14	-26.12	49.02	74.00	-24.98	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	74.63	-21.47	53.16	74.00	-20.84	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	74.01	-26.12	47.89	74.00	-26.11	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results					PASS			
Frequency Range					2450MHz~2550MHz			
Test Mode					TX B Mode Channel 11 ANT1			
1	2483.5	H	78.62	-25.29	53.33	74.00	-20.67	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	78.13	-25.29	52.84	74.00	-21.16	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg

Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin.

2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain.

Result=Reading + Correct Factor.

Margin= Result-Limit.

3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.

Test Results					PASS			
Frequency Range					2310MHz~2410MHz			
Test Mode					TX G Mode Channel 01 ANT1			
N o.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	73.95	-21.47	52.48	74.00	-21.52	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	72.27	-26.12	46.15	74.00	-27.85	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	74.11	-21.47	52.64	74.00	-21.36	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	74.54	-26.12	48.42	74.00	-25.58	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results					PASS			
Frequency Range					2450MHz~2550MHz			
Test Mode					TX G Mode Channel 11 ANT1			
1	2483.5	H	78.23	-25.29	52.94	74.00	-21.06	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	77.01	-25.29	51.72	74.00	-22.28	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.								

Test Results					PASS			
Frequency Range					2310MHz~2410MHz			
Test Mode					TX N(HT20) Mode Channel 01 ANT1+ANT2			
N o.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	74.65	-21.47	53.18	74.00	-20.82	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	73.64	-26.12	47.52	74.00	-26.48	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	73.98	-21.47	52.51	74.00	-21.49	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	73.01	-26.12	46.89	74.00	-27.11	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results					PASS			
Frequency Range					2450MHz~2550MHz			
Test Mode					TX N(HT20) Mode Channel 11 ANT1+ANT2			
1	2483.5	H	78.15	-25.29	52.86	74.00	-21.14	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	77.58	-25.29	52.29	74.00	-21.71	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.								

Test Results					PASS			
Frequency Range					2310MHz~2410MHz			
Test Mode					TX N(HT40) Mode Channel 03 ANT1+ANT2			
N o.	Freq MHz	Polarity	Reading (dBuV/m)	Correct Factor	Result (dBuV/m)	Limit (dBuV/m)	Margin	Remark
1	2390	H	74.44	-21.47	52.97	74.00	-21.03	Peak
2	2390	H	--	-21.47	--	54.00	--	Avg
3	2400	H	73.25	-26.12	47.13	74.00	-26.87	Peak
4	2400	H	--	-26.12	--	54.00	--	Avg
1	2390	V	75.01	-21.47	53.54	74.00	-20.46	Peak
2	2390	V	--	-21.47	--	54.00	--	Avg
3	2400	V	73.66	-26.12	47.54	74.00	-26.46	Peak
4	2400	V	--	-26.12	--	54.00	--	Avg
Test Results					PASS			
Frequency Range					2450MHz~2550MHz			
Test Mode					TX N(HT40) Mode Channel 11 ANT1+ANT2			
1	2483.5	H	78.15	-25.29	52.86	74.00	-21.14	Peak
2	2483.5	H	--	-25.29	--	54.00	--	Avg
1	2483.5	V	77.27	-25.29	51.98	74.00	-22.02	Peak
2	2483.5	V	--	-25.29	--	54.00	--	Avg
Note: 1. Means other frequency and mode comply with standard requirements and at least have 20dB margin. 2. Correct Factor=Cable Loss+ Antenna Factor-Amplifier Gain. Result=Reading + Correct Factor. Margin= Result-Limit. 3. If the limits for the measurement with the average detector are met when using a receiver with a peak detector, the test unit shall be deemed to meet both limits and the measurement with the average detector need not be carried out.								

ABOVE 1000 MHz

Note: All the modes have been tested and recorded worst mode in the report.

Modulation Type: IEEE 802.11N20MIMO

Channel 1 / 2412 MHz									
Frequency	Ant.Pol. H/V	Peak reading (dBuV)	AV reading (dBuV)	Correction Factor	Emission Level		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
					Peak (dBuV/m)	AV (dBuV/m)			
4824.00	H	54.01	51.3	-1.88	52.13	49.42	74	54	-21.87
7236.00	H	44.12	---	7.8	51.92	---	74	54	-22.08
---	H	---	---	---	---	---	---	---	---
4824.00	V	54.98	---	-1.88	53.1	---	74	54	-20.90
7236.00	V	42.18	---	7.8	49.98	---	74	54	-24.02
---	V	---	---	---	---	---	---	---	---

Channel 6 / 2437 MHz									
Frequency	Ant.Pol. H/V	Peak reading (dBuV)	AV reading (dBuV)	Correction Factor	Emission Level		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
					Peak (dBuV/m)	AV (dBuV/m)			
4874.00	H	55.01	52.31	-1.59	53.42	50.72	74	54	-20.58
7311.00	H	41.27	---	8.1	49.37	---	74	54	-24.63
---	H	---	---	---	---	---	---	---	---
4874.00	V	54.12	---	-1.59	52.53	---	74	54	-21.47
7311.00	V	42.54	---	8.1	50.64	---	74	54	-23.36
---	V	---	---	---	---	---	---	---	---

Channel 11 / 2462 MHz									
Frequency	Ant.Pol. H/V	Peak reading (dBuV)	AV reading (dBuV)	Correction Factor	Emission Level		Peak Limit (dBuV/m)	AV Limit (dBuV/m)	Margin (dB)
					Peak (dBuV/m)	AV (dBuV/m)			
4924.00	H	54.94	52	-1.3	53.64	50.7	74	54	-20.36
7386.00	H	40.17	---	9	49.17	---	74	54	-24.83
---	H	---	---	---	---	---	---	---	---
4924.00	V	53.98	---	-1.3	52.68	---	74	54	-21.32
7386.00	V	43.05	---	9	52.05	---	74	54	-21.95
---	V	---	---	---	---	---	---	---	---

Notes:

- 1). Radiated emissions measured in frequency range from 9 KHz~10th harmonic or 26.5GHz (which is less) were made with an instrument using Peak detector mode.
- 2). Data of measurement within this frequency range shown "—" in the table above means the reading of emissions are attenuated more than 20dB below the permissible limits or the field strength is too small to be measured.
- 3). Worst case data at 1Mbps at IEEE 802.11b.
- 4). Measured Level = Reading Level + Factor, Margin = Measured Level – Limit

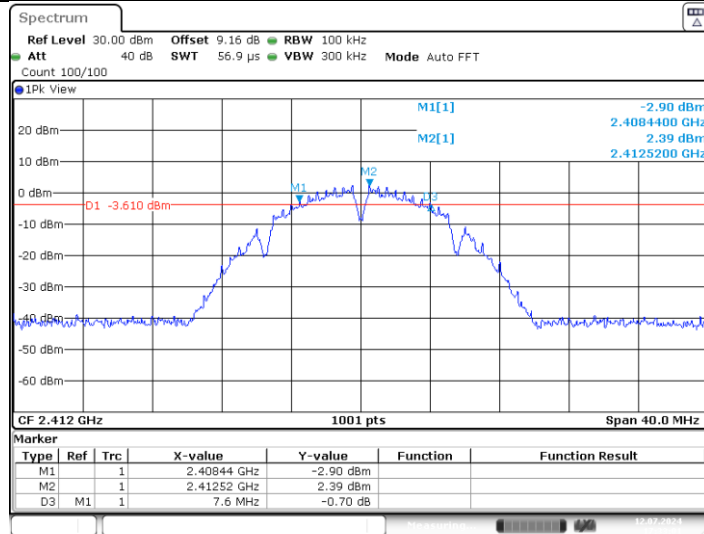
APPENDIXE - BANDWIDTH

1. DTS Bandwidth

TestMode	Antenna	Frequency[MHz]	DTS BW [MHz]	FL[MHz]	FH[MHz]	Limit[MHz]	Verdict
11B	Ant1	2412	7.60	2408.44	2416.04	0.5	PASS
	Ant2	2412	8.08	2407.96	2416.04	0.5	PASS
	Ant1	2437	8.08	2432.96	2441.04	0.5	PASS
	Ant2	2437	8.08	2432.96	2441.04	0.5	PASS
	Ant1	2462	7.12	2458.44	2465.56	0.5	PASS
	Ant2	2462	7.60	2457.96	2465.56	0.5	PASS
11G	Ant1	2412	16.32	2403.84	2420.16	0.5	PASS
	Ant2	2412	16.32	2403.84	2420.16	0.5	PASS
	Ant1	2437	16.32	2428.80	2445.12	0.5	PASS
	Ant2	2437	15.00	2429.48	2444.48	0.5	PASS
	Ant1	2462	15.32	2454.44	2469.76	0.5	PASS
	Ant2	2462	16.32	2453.84	2470.16	0.5	PASS
11N20MIMO	Ant1	2412	17.60	2403.20	2420.80	0.5	PASS
	Ant2	2412	16.40	2404.40	2420.80	0.5	PASS
	Ant1	2437	15.68	2428.84	2444.52	0.5	PASS
	Ant2	2437	16.72	2428.20	2444.92	0.5	PASS
	Ant1	2462	15.12	2454.44	2469.56	0.5	PASS
	Ant2	2462	15.80	2453.76	2469.56	0.5	PASS
11N40MIMO	Ant1	2422	34.48	2405.68	2440.16	0.5	PASS
	Ant2	2422	35.52	2404.48	2440.00	0.5	PASS
	Ant1	2437	35.68	2418.84	2454.52	0.5	PASS
	Ant2	2437	35.44	2419.16	2454.60	0.5	PASS
	Ant1	2452	28.88	2440.72	2469.60	0.5	PASS
	Ant2	2452	33.84	2435.68	2469.52	0.5	PASS

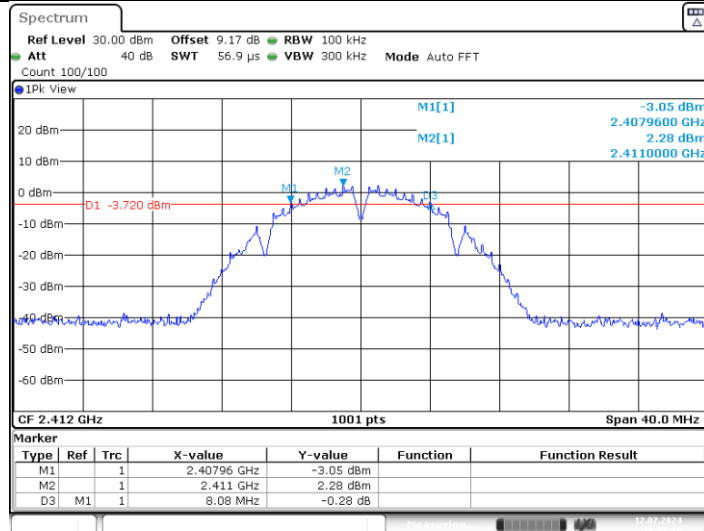
Test Graphs

11B_Ant1_2412



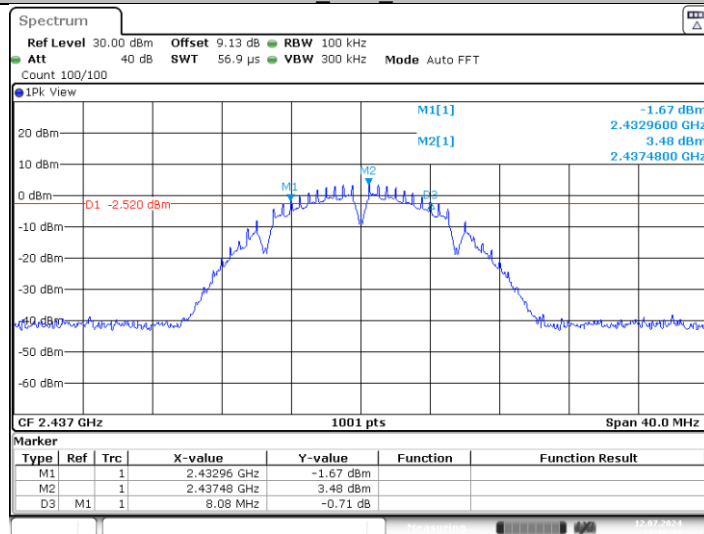
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11B_Ant2_2412



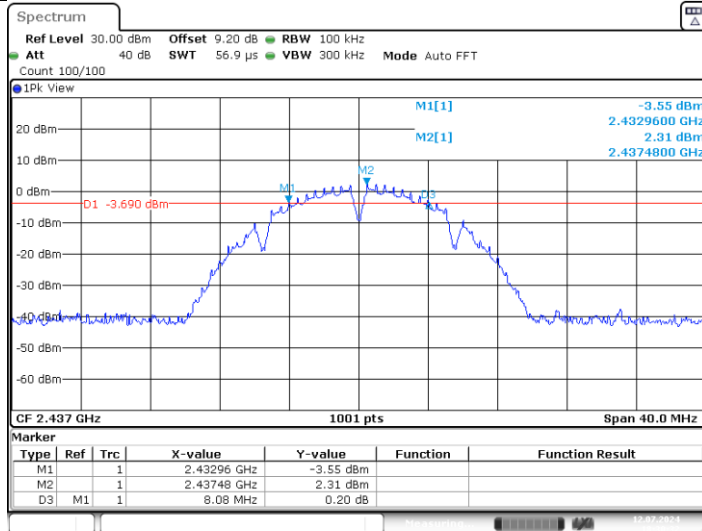
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11B_Ant1_2437

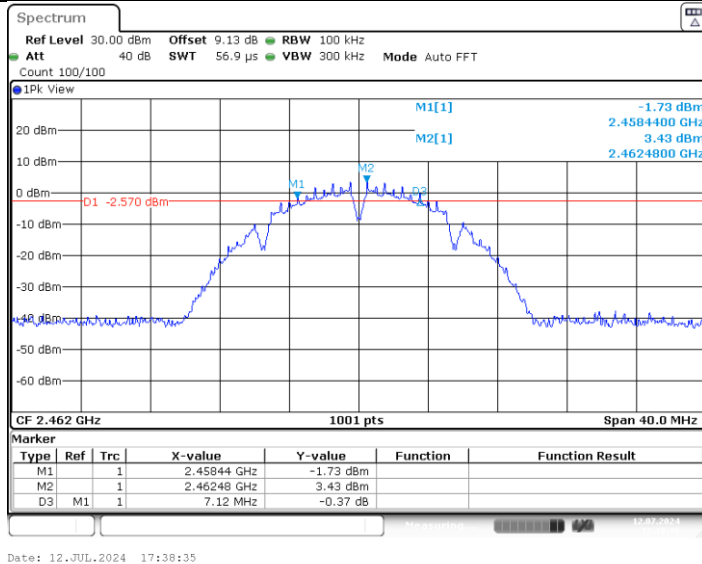


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11B_Ant2_2437



11B_Ant1_2462



11B_Ant2_2462

